

(1) GENERATOR NAME UMETCO MINERALS CORP.  
ADDRESS 137 - 47th Street  
CITY Niagara Falls STATE New York  
CONTACT G. E. Walck PHONE (716) 278-3361

# BARNWELL WASTE MANAGEMENT FACILITY

Operated by CHEM NUCLEAR SYSTEMS, INC  
P O Box 726, Barnwell, South Carolina 29812  
(803) 259 1781

## RADIOACTIVE SHIPMENT MANIFEST FORM

(2) consigned to  
CHEM NUCLEAR SYSTEMS, INC  
P O BOX 726 OSBORN ROAD  
BARNWELL, S C 29812

(3) USE THIS NUMBER ON  
ALL CONTINUATION PAGES

VOLUME ALLOCATION NO Q884-325A PAGE 1 OF 2

(4) Tri-  
CARRIER State ADDRESS Joplin, Missouri 64801  
TELEPHONE 417-624-3131 SHIPPING DATE 8-22-84  
SHIPMENT TYPE Van SHIPMENT SURFACE EXPOSURE .024 mR/hr  
SHIPMENT NO 615-3004 LINER SERIAL NO -  
DRIVER SIGNATURE Bt-Bauchamp DATE 8-22-84

(5) TOTAL FOR EACH CLASS		PROPER SHIPPING NAME & HAZARD CLASS (PER 49 CFR 172.101)	ID NUMBER
NO OF PACKAGES	WEIGHT (Pounds)		
		Radioactive Material, empty packages	UN2908
		Radioactive Material, fissile, n o s —Radioactive Material	UN2918
<u>5</u>	<u>26218</u>	Radioactive Material, low specific activity, n o s —Radioactive Material	UN2912
		Radioactive Material, n o s —Radioactive Material	UN2982
		Radioactive Material, limited quantity, n o s —Radioactive Material	UN2910
		Radioactive Material, special form, n o s —Radioactive Material	UN2974
		Radioactive Material, instruments and articles—Radioactive Material	UN2911
		Other (Specify)	

(6) SHIPMENT TOTALS							
VOLUME (Cubic Feet)	TOTAL NO OF PACKAGES	ACTIVITY (10CFR 20.311)					SOURCE (Pounds)
		ALL ISOTOPIES	TRITIUM	C 14	Tc 99	I 129	
<u>325</u>	<u>5</u>	<u>034</u>	<u>NP</u>	<u>NP</u>	<u>NP</u>	<u>NP</u>	<u>0 5</u>

(7) TOTAL SNM	
ISOTOPE	GRAMS
<u>U 233</u>	<u>N/A</u>
<u>U 235</u>	<u>↓</u>
TOTAL	<u>↓</u>

(8) TOTAL PALLET  
VOLUME (CU FT) N/A

(9) WASTE DESCRIPTION Contaminated Soil  
Misc Debris (10) PHYSICAL FORM/  
SOLIDIFICATION AGENT Solid

(11) CHEMICAL FORM AND  
NAME AND % OF CHELATING AGENT(S) Metal Oxides

(12) WASTE FORM CLASS  
A ☐ B ☐ C ☐

(13) ☒ Yes ( ) No THIS VEHICLE IS CONSIGNEE EXCLUSIVE USE LOADING AND UNLOADING MUST BE  
ACCOMPLISHED BY CONSIGNOR OR CONSIGNEE OR HIS DESIGNATED AGENT

(14) IMPORTANT This is to certify that the above named materials are properly classified described packaged marked  
and labeled and are in proper condition for transportation according to the applicable regulations of the Department of  
Transportation

(15) Certification is hereby made to the South Carolina Department of Health and Environmental Control that this shipment  
of low level radioactive waste has been inspected in accordance with the requirements of South Carolina Radioactive  
Material License No. 097 as amended and the Nuclear Regulatory Commission's License No. 12 13536 01 as  
amended and the effective Barnwell Site Disposal Criteria within 48 hours prior to shipment and further certification is  
made that the inspection revealed no items of non compliance with all applicable laws rules and regulations

Signature \_\_\_\_\_  
Company Umetco Minerals Corporation Date 8-22-84

Date 8-22-84 By \_\_\_\_\_  
Title and Organization Construction Superintendent - Umetco Minerals Corp  
Telephone No (716) 278-3361

☒ This material meets all license requirements

☒ This material was disposed of in accordance with license

☐ Discrepancy \_\_\_\_\_

Date 8/27/84

Authorized Signature \_\_\_\_\_

AUG 30 1984

Title \_\_\_\_\_

UCCNHT0002196

Operated by CHEM NUCLEAR SYSTEMS, INC.

GENERATOR NAME

ALL CONTINUATION PAGES

PAGE 2 OF 2

## CONTINUATION SHEET

[illegible]

Form No CNS 201

(9-83)

CUSTOMER'S COPY

UCCNHT0002197

Tri-State Motor Transit Company

Carrier's No 65587

Name of Carrier

RECEIVED subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading

UMETCO MINERALS CORPORATION

AT ~~Manhattan, Ohio~~

August 22, 19 84 From

METALS DIVISION

UNION CARBIDE CORPORATION

Niagara Falls, NY

For use via carrier truck under the exclusive/sole use shipments/movements

the property described below in apparent good order except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof if this is a rail or a rail water shipment or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CHEN NUCLEAR SYSTEMS, INC.  
Consigned to UCCNHT Division BARNWELL MANAGEMENT FACILITIES

SHIPPER'S ORDER NO

CUSTOMER'S ORDER NO

Destination Waynes BARNWELL (Osborn Road) State South Carolina County Montrose BARNWELL

Route

Delivering Carrier Tri-State Motor TransitCar or Vehicle Initials 8218No 448132Seal No 262504

No Packages	Kind of Package, Description of Articles, Special marks, and Exceptions	*Weight (Sub to correction)	*Class or Rate	Check Column
5	Radioactive Materials LSA, n.o.s. (325 cu. ft.)			
	Radioactive Material UN 2912			
	U-235 Natural			
	Uranium/Thorium Residues (From Chemical Processing)			
	0.016 Max. Curies per Package Less than one (1) pound source			
	material - solid, metal oxide, contaminated soil,			
	building rubble, wood and plant equipment.			

Subject to Section 7 of Conditions of applicable bill of lading if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

If charges are to be prepaid, write "Prepaid" here. To be Prepaid

Third Party

PREPAID (See Below)\*

Received \$

to apply in prepayment of the charges on the property described hereon

Agent or Cashier

Per (The signature here acknowledges only the amount prepaid)

Charges advanced

\$

This shipment is correctly described

Correct weight is \_\_\_\_\_ lbs

Subject to verification by the

\*L.G. Evans

Umetco Minerals Corp.

P.O. Box 97  
Niagara Falls, NY 14302

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

Signed

8-22-84

Vehicle assigned for sole use of consignor. Do not load other freight on the vehicle, do not transfer in route and do not break the seal on truck.

Carrier hereby acknowledges that prior to or at the time this shipment was offered for transportation, the shipper provided or affixed according to applicable regulations the required placards or orange panels (including prescribed identification numbers) for each hazardous material named hereon.

Signed

L.G. Evans

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

METALS DIVISION  
UNION CARBIDE CORPORATION

Umetco Minerals Corporation

Shipper

Agent

Per

Permanent postoffice  
address of shipper  
UC 326-34

G.E. Walck

Per

UCCNHT0002198

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTRL  
Radioactive Waste Shipment Prior Notification and Manifest Form

See Reverse Side for Instructions

1. Name and Address of Shipper: Umetco Minerals Corporation 137 47th Street Niagara Falls, NY 14302		2. Person Responsible for Radioactive Waste Shipment: (a) Name G. E. Walck (b) Title Construction Superintendent (c) Telephone No. (716) 278-3361	
3. Radioactive Waste Transport Permit No.  0211-31-84-X		4. Shipment Identification No.:  0884-325A	
5. Location from which waste will be shipped  Same as (1) Above		6. Name and Address of Consignee Chem-Nuclear Systems, Inc. P.O. Box 726 Barnwell, South Carolina 29812	
7. Scheduled Date of Departure of Shipment: August 22, 1984		8. Estimated Date of Arrival of Shipment August 24, 1984	
9. Carrier: Tri-State Motor Transit	10. Type of Transport Vehicle: Closed Van	11. Trailer No. and Owner (if available)	
12. Routes shipment will follow in State of South Carolina (Be Specific).			

I-20, I-26, US-321, S.C. 3 and S.C. 64

## Manifest Summary

13. Type Container or Cask:		14. Container Spec.		15. Total No. of Containers	
Wood Boxes		CFR 49 173.392 (c)		6	
16. Waste Description, Physical and Chemical Form Metal Plant Oxides, Bldg. Rubble, Wood and Hardward			17. Prominent Radionuclides. Uranium (Nat.) .0028 Thorium (Nat.) .004		
18. Total Curies (mCi) .068		19. Transport Group III		20. Total Cubic Feet 325	
21. Waste Classification					
<input checked="" type="checkbox"/> Radioactive LSA	<input type="checkbox"/> Bulk LSA	Normal Form		Special Form	
<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type B quantity
		<input type="checkbox"/> Large quantity	<input type="checkbox"/> Large quantity	<input type="checkbox"/> Class I	<input type="checkbox"/> Class II
				<input type="checkbox"/> Class III	

### CERTIFICATION

I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the information provided herein is complete and correct to the best of my knowledge, and that the shipper has complied with all the provisions as required by Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act

Date August 8, 1984

G. E. Walck - Construction Supt.  
Typed Name and Title of Agent of Shipper

Signature (G. E. Walck)

CONSIGNEE ACKNOWLEDGEMENT

This acknowledges to the South Carolina Department of Health and Environmental Control that the above-described radioactive waste shipment was received.

Date of Delivery

Signature of Consignee or authorized Agent

Typed or Printed Name and Title

DHEC 802  
(5/80)

(5/80)  
Original: S. Carolina (Copies of this form may be reproduced locally as needed)  
Copy: Chem-Nuclear

UCCNHT0002199

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

## Part I: Shipper's Certificate of Compliance

1. Name of Shipper and Address: Umetco Minerals Corporation 137 - 47th Street Niagara Falls, NY 14302 Telephone No. (716 ) 278-3361	2. Shipment Identification No. 0884-325A
	3. Transport Permit No. 0211-31-84-X

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations, both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wastes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date August 22, 1984

G.E. Walck, Construction Superintendent

Typed Name and Title of Agent of Shipper

Signature *G.E. Walck* 8-22-84

## Part II: Carrier's Certification

1. Name of Carrier and Address: Tri-State Motor Transit Company P.O. Box 113 Joplin, Missouri 64801 Telephone No. (800 ) 641-7591	2. Shipment Identification No. 0884-325A
	3. Transport Trailer No. 448132
4. Scheduled Date of Departure of Shipment: August 22, 1984	5. Estimated Date of Arrival of Shipment: August 24, 1984

Certification is hereby made to the South Carolina Department of Health and Environmental Control that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occurring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

Date August 22, 1984

Typed or Printed Name and Title *Bob Beuchamp*Signature *Bob Beuchamp*

UMETCO MINERALS CORPORATION  
NIAGARA FALLS, NEW YORK

DATE 8-22-84

TRACTOR NO. 8218

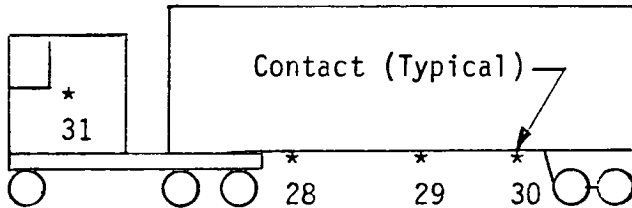
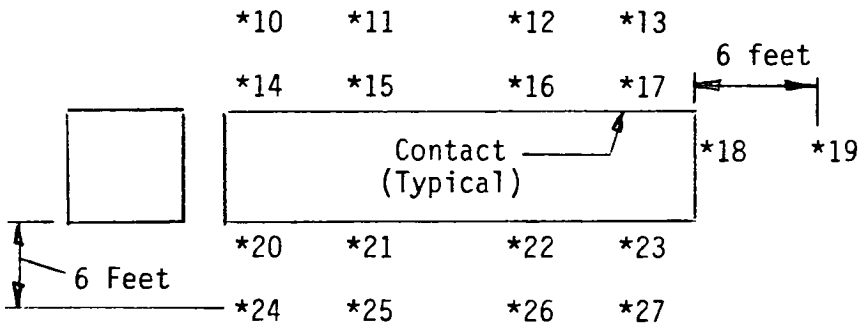
SHIPMENT NO. 615-3004

TRAILER NO. 448132



*1	*2	*3	*4
	*9		
*5	*6	*7	*8

TRUCK FLOOR SURVEY (UNLOADED)



TRUCK EXTERIOR SURVEY (LOADED)

NO.	$\delta$	$\beta$
1	.004	60
2	.006	—
3	.007	—
4	.008	60
5	.005	70
6	.007	—
7	.006	—
8	.008	60
9	—	70
10	.010	—
11	.009	—
12	.011	—
13	.010	—
14	.015	—
15	.008	—
16	.016	—
17	.011	—
18	.010	—
19	.011	—
20	.018	—
21	.012	—
22	.010	—
23	.012	—
24	.011	—
25	.010	—
26	.009	—
27	.010	—
28	.034	—
29	.008	—
30	.014	—
31	.006	—

LEGEND:

\* Location of Reading

$\delta$  = mR/hr Ludlum Model 19 (S/N 22534)

$\beta$  = dpm/100 cm<sup>2</sup> Ludlum Model 15 (S/N 28886)  
w/Ludlum Model 44-9 Probe (S/N 12708) - Eff. 42%

*J. E. Walsh*  
(Survey performed by)

UCCNHT0002201

Umetco Minerals Corporation  
Niagara Falls, New York

Date 8-16-84

CONTAINER SURVEY

BOX CONTROL NO. UM 84-127 BOX CAULKED YES  
BOX BANDED YES BOX WEIGHT 5272

RADIATION SURVEY (Total)

CONTACT .032 mR/hr.

3 FEET .017 mR/hr.

INSTRUMENT Ludlum Model 19

SERIAL NUMBER 22534

RADIATION SURVEY (Removable)

SMEAR NO. A 29526

0 dpm/100cm<sup>2</sup>  $\alpha$

BKG dpm/100cm<sup>2</sup>  $\beta$

INSTRUMENT NMC Model PC-55

SERIAL NUMBER 81-2712-05

UCCNHT0002202

Umetco Minerals Corporation  
Niagara Falls, New York

Date 8-16-84

CONTAINER SURVEY

BOX CONTROL NO. UM 84 - 128 BOX CAULKED YES  
BOX BANDED YES BOX WEIGHT 5192

RADIATION SURVEY (Total)

CONTACT .034 mR/hr.

3 FEET .015 mR/hr.

INSTRUMENT Ludlum Model 19

SERIAL NUMBER 22534

RADIATION SURVEY (Removable)

SMEAR NO. A 29525

0 dpm/100cm<sup>2</sup>  $\alpha$

BKG dpm/100cm<sup>2</sup>  $\beta$

INSTRUMENT NMC Model PC-55

SERIAL NUMBER 81-2712-05

UCCNHT0002203



Umetco Minerals Corporation  
Niagara Falls, New York

Date 8-16-84

CONTAINER SURVEY

BOX CONTROL NO. UM84 -129 BOX CAULKED YES  
BOX BANDED YES BOX WEIGHT 5324

RADIATION SURVEY (Total)

CONTACT .040 mR/hr.

3 FEET .014 mR/hr.

INSTRUMENT Ludlum Model 19

SERIAL NUMBER 22534

RADIATION SURVEY (Removable)

SMEAR NO. A 29524

0 dpm/100cm<sup>2</sup>  $\alpha$

BKG dpm/100cm<sup>2</sup>  $\beta$

INSTRUMENT NMC Model PC-55

SERIAL NUMBER 81-2712-05

UCCNHT0002204

Umetco Minerals Corporation  
Niagara Falls, New York

Date 8-16-84

CONTAINER SURVEY

BOX CONTROL NO. UM 84 130 BOX CAULKED YES  
BOX BANDED YES BOX WEIGHT 5120

RADIATION SURVEY (Total)

CONTACT .046 mR/hr.

3 FEET .014 mR/hr.

INSTRUMENT Ludlum Model 19

SERIAL NUMBER 22534

RADIATION SURVEY (Removable)

SMEAR NO. A 29523

0 dpm/100cm<sup>2</sup>  $\alpha$

BKG dpm/100cm<sup>2</sup>  $\beta$

INSTRUMENT NMC Model PC-55

SERIAL NUMBER 81-2712-05

UCCNHT0002205

Umetco Minerals Corporation  
Niagara Falls, New York

Date 8-16-84

CONTAINER SURVEY

BOX CONTROL NO. UM84-132 BOX CAULKED YES

BOX BANDED YES BOX WEIGHT 5310

RADIATION SURVEY (Total)

CONTACT .028 mR/hr.

3 FEET .012 mR/hr.

INSTRUMENT Ludlum Model 19

SERIAL NUMBER 22534

RADIATION SURVEY (Removable)

SMEAR NO. A 29521

0 dpm/100cm<sup>2</sup>  $\propto$

BKG dpm/100cm<sup>2</sup>  $\beta$

INSTRUMENT NMC Model PC-55

SERIAL NUMBER 81-2712-05

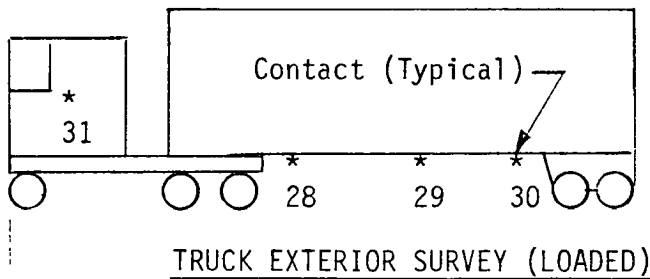
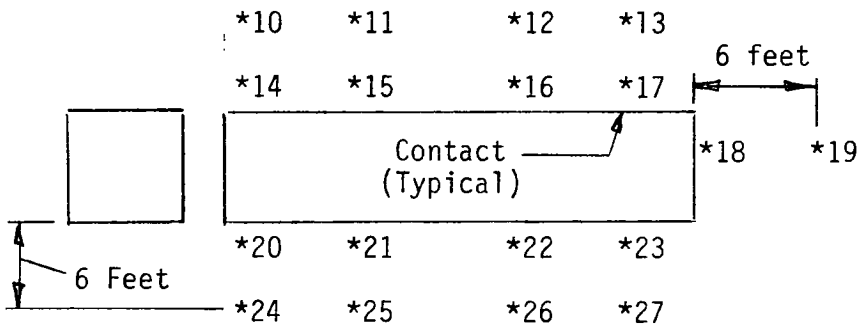
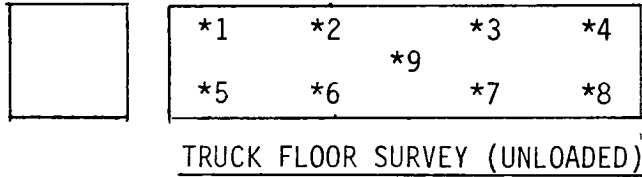
UMETCO MINERALS CORPORATION  
 NIAGARA FALLS, NEW YORK

DATE 8-22-84

TRACTOR NO. 8218

SHIPMENT NO. 615-3004

TRAILER NO. 448132



NO.	$\delta$	$B$
1	.004	60
2	.006	—
3	.007	—
4	.008	60
5	.005	70
6	.007	—
7	.006	—
8	.008	60
9	—	70
10	.010	—
11	.009	—
12	.011	—
13	.010	—
14	.015	—
15	.008	—
16	.016	—
17	.011	—
18	.010	—
19	.011	—
20	.018	—
21	.012	—
22	.010	—
23	.012	—
24	.011	—
25	.010	—
26	.009	—
27	.010	—
28	.034	—
29	.008	—
30	.014	—
31	.006	—

LEGEND:

\* Location of Reading

$\delta$  = mR/hr Ludlum Model 19 (S/N 22534)

$B$  = dpm/100 cm<sup>2</sup> Ludlum Model 15 (S/N 28886)  
 w/Ludlum Model 44-9 Probe (S/N 12708) - Eff. 42%

*J. E. Walsh*  
 (Survey performed by)

UCCNHT0002207

**Union Carbide Corporation**  
LINDE DIVISION • GAS PRODUCTS COMPLEX  
4501 ROYAL AVENUE NIAGARA FALLS, N.Y. 14304

## WEIGHT TICKET

101160 DB/22/84  
17 8132 22 8212  
GROSS 17100

ST

101160 FB/22/84  
8132 22 8212  
GROSS 14960

Tr

101170 DB/22/84  
8132 22 8212  
GROSS 16500

Gross

101170 DB/22/84  
8132 22 8212  
GROSS 14100

Trailer

**Union Carbide Corporation**

LINDE DIVISION • GAS PRODUCTS COMPLEX

4501 ROYAL AVENUE NIAGARA FALLS, N.Y. 14304

**WEIGHT TICKET**

07:55 DB 22/84  
H48002 SF10  
22 22  
GROSS 30040 lb

10:13 DB 22/84  
8133 8218  
22 22  
GROSS 55520 lb  
TARE 00000 lb  
NET 55520 lb

(1) GENERATOR NAME UMETCO MINERALS CORPORATION

ADDRESS 137 - 47th Street

CITY Niagara Falls STATE New York

CONTACT G. F. Walck PHONE (716) 278-3361

(2) **consigned to**  
CHEM NUCLEAR SYSTEMS, INC  
P. O. BOX 726, OSBORN ROAD  
BARNWELL, S.C. 29812

(3) USE THIS NUMBER ON  
ALL CONTINUATION PAGES

VOLUME ALLOCATION NO

PAGE 1

OF 2

## BARNWELL WASTE MANAGEMENT FACILITY

Operated by CHEM-NUCLEAR SYSTEMS, INC  
P. O. Box 726, Barnwell, South Carolina 29812

(803) 259-1781

### RADIOACTIVE SHIPMENT MANIFEST FORM

(4)

**Tri-**  
CARRIER State ADDRESS Toplin, Missouri 64801

TELEPHONE 617-624-3131 SHIPPING DATE 9/4/84

SHIPMENT TYPE Van SHIPMENT SURFACE EXPOSURE 032 mR/hR

SHIPMENT NO 615-3005 LINER SERIAL NO —

DRIVER SIGNATURE Clinton Williams DATE 9-4-84

(5) TOTAL FOR EACH CLASS		PROPER SHIPPING NAME & HAZARD CLASS (PER 49 CFR 172.101)	ID NUMBER
NO OF PACKAGES	WEIGHT (Pounds)		
		Radioactive Material, empty packages	UN2908
		Radioactive Material, fissile, n.o.s. —Radioactive Material	UN2918
<u>8</u>	<u>39093</u>	Radioactive Material, low specific activity, n.o.s. —Radioactive Material	UN2912
		Radioactive Material, n.o.s. —Radioactive Material	UN2982
		Radioactive Material, limited quantity, n.o.s. —Radioactive Material	UN2910
		Radioactive Material, special form, n.o.s. —Radioactive Material	UN2974
		Radioactive Material, instruments and articles—Radioactive Material	UN2911
		Other (Specify)	

(6) SHIPMENT TOTALS							
VOLUME (Cubic Feet)	TOTAL NO OF PACKAGES	ACTIVITY (10CFR 20.311)					SOURCE (Pounds)
		<input type="checkbox"/> Curies <input checked="" type="checkbox"/> Millicuries					
		ALL ISOTOPES	TRITIUM	C 14	Tc 99	I 129	
520	8	.054	NP	NP	NP	NP	0.8

(7) TOTAL SNM	
ISOTOPE	GRAMS
U-233	<u>N/A</u>
U-235	<u>1</u>
TOTAL	<u>V</u>

(9) WASTE DESCRIPTION Contaminated Soil  
Misc. Debris

(10) PHYSICAL FORM/  
SOLIDIFICATION AGENT Solid

(11) CHEMICAL FORM AND  
NAME AND % OF CHELATING AGENT(S) Metal Oxides

(12) WASTE FORM CLASS  
☐ A ☐ B ☐ C

(13) (X) Yes ( ) No THIS VEHICLE IS CONIGNED EXCLUSIVE USE LOADING AND UNLOADING MUST BE ACCOMPLISHED BY CONSIGNOR OR CONSIGNEE OR HIS DESIGNATED AGENT

(14) IMPORTANT "This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

Signature S. E. Walck

Company Umetco Minerals Corp Date 9/4/84

(15) "Certification is hereby made to the South Carolina Department of Health and Environmental Control that this shipment of low level radioactive waste has been inspected in accordance with the requirements of South Carolina Radioactive Material License No. 097 as amended, and the Nuclear Regulatory Commission's License No. 12-13536-01 as amended, and the effective Barnwell Site Disposal Criteria within 48 hours prior to shipment, and further certification is made that the inspection revealed no items of non compliance with all applicable laws, rules and regulations."

Date 9/4/84 By S. E. Walck

Title and Organization Construction Superintendent - Umetco Minerals Corp.

Telephone No. (716) 278-3361

### CNSI USE ONLY

☐ This material meets all license requirements

☐ This material was disposed of in accordance with license

☐ Discrepancy \_\_\_\_\_

### TRIPLICATE COPY

Form No CNS-201

(9-83)

SEE INSTRUCTIONS ON REVERSE SIDE  
FOR FILLING OUT THIS FORM

Arrival Date \_\_\_\_\_ Arrival Survey No. \_\_\_\_\_

Date/Time Buried \_\_\_\_\_ H. P. Initial \_\_\_\_\_

Trench No. \_\_\_\_\_ Location Code \_\_\_\_\_

Waste Class Code \_\_\_\_\_

Personnel Exposure \_\_\_\_\_

Date \_\_\_\_\_

Authorized Signature \_\_\_\_\_ Title \_\_\_\_\_

UCCNHT0002210





(1) GENERATOR NAME UMETCO MINERALS CORPORATION

ADDRESS 137 - 47th Street

CITY Niagara Falls STATE New York

CONTACT G.E. Walck PHONE (716)278-3361

(2) consigned to  
CHEM NUCLEAR SYSTEMS, INC.  
P O BOX 726, OSBORN ROAD  
BARNWELL, S C 29812

## BARNWELL WASTE MANAGEMENT FACILITY

Operated by CHEM-NUCLEAR SYSTEMS, INC  
P O Box 726, Barnwell, South Carolina 29812  
(803) 259-1781

### RADIOACTIVE SHIPMENT MANIFEST FORM

(3) USE THIS NUMBER ON  
ALL CONTINUATION PAGES

VOLUME ALLOCATION NO

0984-211A

PAGE 1

OF 2

(4)

Tri-

CARRIER State ADDRESS Joplin, Missouri 64801

TELEPHONE 417-624-3131 SHIPPING DATE 9/4/84

SHIPMENT TYPE Van SHIPMENT SURFACE EXPOSURE .032 mR/hr

SHIPMENT NO 615-3005 LINER SERIAL NO —

DRIVER SIGNATURE Clinton Williams DATE 9-4-84

(5) TOTAL FOR EACH CLASS		PROPER SHIPPING NAME & HAZARD CLASS (PER 49 CFR 172.101)	ID NUMBER
NO OF PACKAGES	WEIGHT (Pounds)		
		Radioactive Material, empty packages	UN2908
		Radioactive Material, fissile, n o s —Radioactive Material	UN2918
8	39083	Radioactive Material, low specific activity, n o s —Radioactive Material	UN2912
		Radioactive Material, n o s —Radioactive Material	UN2982
		Radioactive Material, limited quantity, n o s —Radioactive Material	UN2910
		Radioactive Material, special form, n o s —Radioactive Material	UN2974
		Radioactive Material, instruments and articles—Radioactive Material	UN2911
		Other (Specify)	

(6) SHIPMENT TOTALS							
VOLUME (Cubic Feet)	TOTAL NO OF PACKAGES	ACTIVITY (10CFR 20.311)					SOURCE (Pounds)
		ALL ISOTOPES	TRITIUM	C 14	Tc 99	I 129	
520	8	.054	NP	NP	NP	NP	0.8

(7) TOTAL SNM	
ISOTOPE	GRAMS
U-233	N/A
U 235	
TOTAL	

(8)

TOTAL PALLET  
VOLUME (CU FT) N/A

(11) CHEMICAL FORM AND

NAME AND % OF CHELATING AGENT(S) Metal Oxides

(12) WASTE FORM CLASS

☒ A ☐ B ☐ C

(9) WASTE DESCRIPTION Contaminated Soil  
Misc. Debris

(10) PHYSICAL FORM/  
SOLIDIFICATION AGENT

Solid

(13) (X) Yes ( ) No THIS VEHICLE IS CONSIGNED EXCLUSIVE USE LOADING AND UNLOADING MUST BE  
ACCOMPLISHED BY CONSIGNOR OR CONSIGNEE OR HIS DESIGNATED AGENT

(14) IMPORTANT "This is to certify that the above named materials are properly classified, described, packaged, marked  
and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of  
Transportation

Signature

G.E. Walck

Company

Umetco Minerals Corp

Date 9/4/84

(15) "Certification is hereby made to the South Carolina Department of Health and Environmental Control that this shipment  
of low level radioactive waste has been inspected in accordance with the requirements of South Carolina Radioactive  
Material License No 097 as amended, and the Nuclear Regulatory Commission's License No 12 13536 01 as  
amended, and the effective Barnwell Site Disposal Criteria within 48 hours prior to shipment, and further certification is  
made that the inspection revealed no items of non compliance with all applicable laws, rules and regulations "

Date 9/4/84

By

G.E. Walck

Title and Organization Construction Superintendent - Umetco Minerals Corp.

Telephone No (716) 278-3361

☒ This material meets all license requirements

☒ This material was disposed of in accordance with license

☐ Discrepancy

Date

Authorized Signature

Title

SEP 12 1984

UCCNHT0002212

# Union Carbide Corporation

LINDE DIVISION • GAS PRODUCTS COMPLEX

4501 ROYAL AVENUE • NIAGARA FALLS, N.Y. 14304

## WEIGHT TICKET

12:20:09/04/84

FACE 3992  
GROSS 12550 FAIT

12:20:09/04/84  
TARE 3992  
GROSS 12550  
NET 28780  
GAIN

12:20:09/04/84  
FACE 3992  
TARE 3992  
GROSS 12550  
NET 28780  
GAIN

12:20:09/04/84  
FACE 3992  
TARE 3992  
GROSS 12550  
NET 28780  
GAIN

# Union Carbide Corporation

LINDE DIVISION • GAS PRODUCTS COMPLEX

4501 ROYAL AVENUE NIAGARA FALLS, N.Y. 14304

## WEIGHT TICKET

INSTR. 3992

WGT. 445102

09:56:03/04/85

5:02 11:59

CR255 325404

3.0 AT DESTINATION (Union Carbide Corporation, Uravan, Colorado)

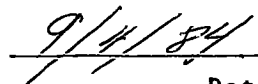
- 3.1 Give notification of arrival and receive guidance to unloading site.
- 3.2 Examine security seals and inspect outside of truck for damage or pilfering.
- 3.3 The shipment must be unloaded by Consignor from the transport vehicle in which originally loaded.
- 3.4 UCC or its representative will certify vehicles clean and available for Unrestricted Use and decontaminate if necessary.

4.0 PENALTY

- 4.1 Any deviation from these instructions or violations of State and Federal laws could result in carrier penalty.



Driver's Signature



Date

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's Certificate of Compliance

1. Name of Shipper and Address: Umetco Minerals Corporation 137 - 47th Street Niagara Falls, NY 14302 Telephone No. (716) 278-3361	2. Shipment Identification No. 0984-211A
	3. Transport Permit No. 0211-31-84-X

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations, both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wastes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date September 4, 1984  
G.E. Walck, Construction Superintendent

Typed Name and Title of Agent of Shipper

Signature

Part II: Carrier's Certification

1. Name of Carrier and Address: Tri-State Motor Transit Company P.O. Box 113 Joplin, Missouri 64801 Telephone No. (800) 641-7591	2. Shipment Identification No. 0984-211A
	3. Transport Trailer No. 445102
4. Scheduled Date of Departure of Shipment: September 4, 1984	5. Estimated Date of Arrival of Shipment: September 6, 1984

Certification is hereby made to the South Carolina Department of Health and Environmental Control that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occurring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

Date September 4, 1984

Typed or Printed Name and Title

Signature

(1) GENERATOR NAME UMETCO MINERALS CORPORATION

ADDRESS 137 - 47th Street

CITY Niagara Falls STATE New York

CONTACT L.E. Walck PHONE (716) 278-3361

(2) consigned to  
CHEM NUCLEAR SYSTEMS, INC  
P O BOX 726, OSBORN ROAD  
BARNWELL SC 29812

(3) USE THIS NUMBER ON  
ALL CONTINUATION PAGES

VOLUME ALLOCATION NO

PAGE 1

OF 2

## BARNWELL WASTE MANAGEMENT FACILITY

Operated by CHEM NUCLEAR SYSTEMS, INC  
P O Box 726, Barnwell, South Carolina 29812  
(803) 259-1781

### RADIOACTIVE SHIPMENT MANIFEST FORM

(4) Trl-  
CARRIER State ADDRESS Joplin, Missouri 64601  
TELEPHONE 417-624-1131 SHIPPING DATE 9/4/84  
SHIPMENT TYPE Van SHIPMENT SURFACE EXPOSURE 0.12 mR/hr  
SHIPMENT NO 015-3005 LINER SERIAL NO ---  
DRIVER SIGNATURE John J. Horton DATE 9-4-84

(5) TOTAL FOR EACH CLASS		PROPER SHIPPING NAME & HAZARD CLASS (PER 49 CFR 172.101)	ID NUMBER
NO OF PACKAGES	WEIGHT (Pounds)		
		Radioactive Material, empty packages	UN2908
		Radioactive Material, fissile, n o s - Radioactive Material	UN2918
		Radioactive Material, low specific activity, n o s - Radioactive Material	UN2912
<u>8</u>	<u>39083</u>	Radioactive Material, n o s - Radioactive Material	UN2982
		Radioactive Material, limited quantity, n o s - Radioactive Material	UN2910
		Radioactive Material, special form, n o s - Radioactive Material	UN2974
		Radioactive Material, instruments and articles - Radioactive Material	UN2971
		Other (Specify)	

(6) SHIPMENT TOTALS							
VOLUME (Cubic Feet)	TOTAL NO OF PACKAGES	ACTIVITY (10CFR 20.311) <input type="checkbox"/> Curies <input checked="" type="checkbox"/> mCi					SOURCE (Pounds)
		ALL ISOTOPE	TRITIUM	C 14	Tc 99	I 129	
520	8	0.054	NP	NP	NP	NP	1.8

(7) TOTAL SNM	
ISOTOPE	GRAMS
U 233	N/A
U 235	
TOTAL	

(8) TOTAL PALLET  
VOLUME (CU FT) N/A

(11) CHEMICAL FORM AND NAME AND % OF CHELATING AGENT(S) Metal Oxides

(12) WASTE FORM CLASS  
A B C

(9) WASTE DESCRIPTION Contaminated Soil  
Misc. Debris (10) PHYSICAL FORM/  
SOLIDIFICATION AGENT Solid

(13) (X) Yes ( ) No THIS VEHICLE IS CONIGNED EXCLUSIVE USE LOADING AND UNLOADING MUST BE ACCOMPLISHED BY CONSIGNOR OR CONSIGNEE OR HIS DESIGNATED AGENT

(14) IMPORTANT "This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation"

Signature

Company Umetco Minerals Corp

Date 9/4/84

(15) Certification is hereby made to the South Carolina Department of Health and Environmental Control that this shipment of low level radioactive waste has been inspected in accordance with the requirements of South Carolina Radioactive Material License No 097 as amended and the Nuclear Regulatory Commission's License No 12 13536 01 as amended and the effective Barnwell Site Disposal Criteria within 48 hours prior to shipment and further certification is made that the inspection revealed no items of non compliance with all applicable laws, rules and regulations"

Date 9/4/84

By

Title and Organization Construction Superintendent - Umetco Minerals Corp

Telephone No (716) 278-3361

### CNSI USE ONLY

- ☐ This material meets all license requirements  
☐ This material was disposed of in accordance with license  
☐ Discrepancy

### TRIPLICATE COPY

Form No CNS 201  
(9-83)

SEE INSTRUCTIONS ON REVERSE SIDE  
FOR FILLING OUT THIS FORM

Arrival Date \_\_\_\_\_ Arrival Survey No \_\_\_\_\_

Date/Time Buried \_\_\_\_\_ H P Initial \_\_\_\_\_

Trench No \_\_\_\_\_ Location Code \_\_\_\_\_

Waste Class Code \_\_\_\_\_

Personnel Exposure \_\_\_\_\_

Date \_\_\_\_\_

Authorized Signature \_\_\_\_\_ Title \_\_\_\_\_

Attn: SYbil Horton - Volume Allocation No. 0984-211A

*Telecopied  
9/4*

UCCCNHT0002217

Form RHA-PNC  
(5/80)SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
Radioactive Waste Shipment Prior Notification and Manifest Form

See Reverse Side for Instructions

1. Name and Address of Shipper. Umetco Minerals Corporation 137 47th Street Niagara Falls, NY 14302		2. Person Responsible for Radioactive Waste Shipment (a) Name G.E. Walck (b) Title Construction Superintendent (c) Telephone No. (716) 278-3361	
3. Radioactive Waste Transport Permit No. 0211-31-84-X		4. Shipment Identification No. 0984-211A	
5. Location from which waste will be shipped Same as (1) Above		6. Name and Address of Consignee Chem-Nuclear Systems, Inc. P.O. Box 726 Barnwell, South Carolina 29812	
7. Scheduled Date of Departure of Shipment September 4, 1984		8. Estimated Date of Arrival of Shipment September 6, 1984	
9. Carrier Tri-State Motor Transit	10. Type of Transport Vehicle Closed Van	11. Trailer No. and Owner (if available) 445102.	
12. Routes shipment will follow in State of South Carolina (Be Specific)  I-20, I-26, US-321, S.C. 3 and S.C. 64			


## Manifest Summary

13. Type Container or Cask Wood Boxes	14. Container Spec. CFR 49 173.392 (c)	15. Total No. of Containers 8																				
16. Waste Description, Physical and Chemical Form Contaminated Soil, Metal Oxides, Bldg. Rubble, Wood and Plant Hardware	17. Prominent Radionuclides Uranium (Nat.) .0028 Thorium (Nat.) .004																					
18. Total Curies (mCi) .054	19. Transport Group III	20. Total Cubic Feet 520																				
21. Waste Classification																						
<table border="0"> <tr> <td><input checked="" type="checkbox"/> Radioactive LSA</td> <td><input type="checkbox"/> Bulk LSA</td> <td>Normal Form</td> <td>Special Form</td> <td>Fissile</td> </tr> <tr> <td><input type="checkbox"/> Radioactive LSA greater than Type A quantities</td> <td><input type="checkbox"/> Limited quantities and radioactive devices</td> <td><input type="checkbox"/> Type A quantity</td> <td><input type="checkbox"/> Type B quantity</td> <td><input type="checkbox"/> Class I</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Type B quantity</td> <td><input type="checkbox"/> Type B quantity</td> <td><input type="checkbox"/> Class II</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Large quantity</td> <td><input type="checkbox"/> Large quantity</td> <td><input type="checkbox"/> Class III</td> </tr> </table>			<input checked="" type="checkbox"/> Radioactive LSA	<input type="checkbox"/> Bulk LSA	Normal Form	Special Form	Fissile	<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Class I			<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Class II			<input type="checkbox"/> Large quantity	<input type="checkbox"/> Large quantity	<input type="checkbox"/> Class III
<input checked="" type="checkbox"/> Radioactive LSA	<input type="checkbox"/> Bulk LSA	Normal Form	Special Form	Fissile																		
<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Class I																		
		<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Class II																		
		<input type="checkbox"/> Large quantity	<input type="checkbox"/> Large quantity	<input type="checkbox"/> Class III																		

UN2912

## CERTIFICATION

I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the information provided herein is complete and correct to the best of my knowledge, and that the shipper has complied with all the provisions as required by Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act

Date 8-28-84G.E. Walck - Construction Supt.  
Typed Name and Title of Agent of Shipper
  
Signature (G.E. Walck)

## CONSIGNEE ACKNOWLEDGEMENT

This acknowledges to the South Carolina Department of Health and Environmental Control that the above-described radioactive waste shipment was received

Date of Delivery \_\_\_\_\_

Signature of Consignee or authorized Agent \_\_\_\_\_

Typed or Printed Name and Title \_\_\_\_\_

DHEC 802

(5/80)

Original: S. Carolina  
Copy. Chem-Nuclear

(Copies of this form may be reproduced locally as needed)

UCCNHT0002218

Form RHA-PNC  
(5/80)SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTRL  
Radioactive Waste Shipment Prior Notification and Manifest Form

See Reverse Side for Instructions

1. Name and Address of Shipper Umetco Minerals Corporation 137 47th Street Niagara Falls, NY 14302		2. Person Responsible for Radioactive Waste Shipment (a) Name G.E. Walck (b) Title Construction Superintendent (c) Telephone No. (716) 278-3361	
3. Radioactive Waste Transport Permit No 0211-31-84-X		4. Shipment Identification No. 0984-211A	
5. Location from which waste will be shipped Same as (1) Above		6. Name and Address of Consignee Chem-Nuclear Systems, Inc. P.O. Box 726 Barnwell, South Carolina 29812	
7. Scheduled Date of Departure of Shipment September 4, 1984		8. Estimated Date of Arrival of Shipment September 6, 1984	
9. Carrier Tri-State Motor Transit	10. Type of Transport Vehicle Closed Van	11. Trailer No. and Owner (if available)	
12. Routes shipment will follow in State of South Carolina (Be Specific)  I-20, I-26, US-321, S.C. 3 and S.C. 64			

## Manifest Summary

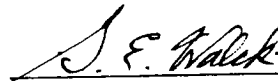
13. Type Container or Cask Wood Boxes	14. Container Spec. CFR 49 173.392 (c)	15. Total No of Containers 8																				
16. Waste Description, Physical and Chemical Form Contaminated Soil, Metal Oxides, Bldg. Rubble, Wood and Plant Hardware	17. Prominent Radionuclides Uranium (Nat.) .0028 Thorium (Nat.) .004																					
18. Total Curies (mCi) .054	19. Transport Group III	20. Total Cubic Feet 520																				
21. Waste Classification																						
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<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Class I																		
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## CERTIFICATION

I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the information provided herein is complete and correct to the best of my knowledge, and that the shipper has complied with all the provisions as required by Act No 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act

Date \_\_\_\_\_

G.E. Walck - Construction Supt.  
Typed Name and Title of Agent of Shipper

  
Signature (G.E. Walck)

## CONSIGNEE ACKNOWLEDGEMENT

This acknowledges to the South Carolina Department of Health and Environmental Control that the above-described radioactive waste shipment was received

Date of Delivery \_\_\_\_\_

\_\_\_\_\_  
Signature of Consignee or authorized Agent

\_\_\_\_\_  
Typed or Printed Name and Title

DHEC 802

(5/80)

Original. S. Carolina  
Copy: Chem-Nuclear

(Copies of this form may be reproduced locally as needed)

UCCNHT0002219



Form RHA-PNC  
(5/80)SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTRL  
Radioactive Waste Shipment Prior Notification and Manifest Form

See Reverse Side for Instructions

1. Name and Address of Shipper Umetco Minerals Corporation 137 47th Street Niagara Falls, NY 14302		2. Person Responsible for Radioactive Waste Shipment (a) Name G.E. Walck (b) Title Construction Superintendent (c) Telephone No. (716) 278-3361	
3. Radioactive Waste Transport Permit No 0211-31-84-X		4. Shipment Identification No.: 0984-211A	
5. Location from which waste will be shipped Same as (1) Above		6. Name and Address of Consignee Chem-Nuclear Systems, Inc. P.O. Box 726 Barnwell, South Carolina 29812	
7. Scheduled Date of Departure of Shipment. September 4, 1984		8. Estimated Date of Arrival of Shipment September 6, 1984	
9. Carrier Tri-State Motor Transit	10. Type of Transport Vehicle Closed Van	11. Trailer No. and Owner (if available)	
12. Routes shipment will follow in State of South Carolina (Be Specific):  I-20, I-26, US-321, S.C. 3 and S.C. 64			

## Manifest Summary

13. Type Container or Cask Wood Boxes	14. Container Spec CFR 49 173.392 (c)	15. Total No. of Containers 8										
16. Waste Description, Physical and Chemical Form Contaminated Soil, Metal Oxides, Bldg. Rubble, Wood and Plant Hardware	17. Prominent Radionuclides Uranium (Nat.) .0028 Thorium (Nat.) .004											
18. Total Curies (mCi) .054	19. Transport Group III	20. Total Cubic Feet 520										
21. Waste Classification												
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<input checked="" type="checkbox"/> Radioactive LSA	<input type="checkbox"/> Bulk LSA	Normal Form	Special Form	Fissile								
<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity <input type="checkbox"/> Type B quantity <input type="checkbox"/> Large quantity	<input type="checkbox"/> Type A quantity <input type="checkbox"/> Type B quantity <input type="checkbox"/> Large quantity	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III								


UN2912

## CERTIFICATION

I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the information provided herein is complete and correct to the best of my knowledge, and that the shipper has complied with all the provisions as required by Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act

Date \_\_\_\_\_

G.E. Walck - Construction Supt.  
Typed Name and Title of Agent of Shipper

  
Signature (G.E. Walck)

## CONSIGNEE ACKNOWLEDGEMENT

This acknowledges to the South Carolina Department of Health and Environmental Control that the above-described radioactive waste shipment was received

Date of Delivery \_\_\_\_\_

\_\_\_\_\_  
Signature of Consignee or authorized Agent

\_\_\_\_\_  
Typed or Printed Name and Title

DHEC 802

(5/80)

Original. S. Carolina  
Copy: Chem-Nuclear

(Copies of this form may be reproduced locally as needed)

UCCNHT0002220

GENERATOR NAME UNITCO MINERALS CORPORATION

PAGE 1 OF 2

PAGE 1 OF 2

PAGE TOTALS

**CUSTOMER'S COPY**

Attn Sybil Horton - Volume Allocation No 0984-211A

UCCNHT0002221

Form RHA-PNC  
(5/80)SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
Radioactive Waste Shipment Prior Notification and Manifest Form

See Reverse Side for Instructions

1. Name and Address of Shipper Umetco Minerals Corporation 137 47th Street Niagara Falls, NY 14302		2. Person Responsible for Radioactive Waste Shipment: (a) Name G.E. Walck (b) Title Construction Superintendent (c) Telephone No. (716) 278-3361	
3. Radioactive Waste Transport Permit No 0211-31-84-X		4. Shipment Identification No. 0984-211A	
5. Location from which waste will be shipped Same as (1) Above		6. Name and Address of Consignee Chem-Nuclear Systems, Inc. P.O. Box 726 Barnwell, South Carolina 29812	
7. Scheduled Date of Departure of Shipment September 4, 1984		8. Estimated Date of Arrival of Shipment September 6, 1984	
9. Carrier Tri-State Motor Transit	10. Type of Transport Vehicle Closed Van	11. Trailer No and Owner (if available) 445102	

12. Routes shipment will follow in State of South Carolina (Be Specific)

I-20, I-26, US-321, S.C. 3 and S.C. 64


## Manifest Summary

13. Type Container or Cask Wood Boxes	14. Container Spec. CFR 49 173.392 (c)	15. Total No of Containers 8																					
16. Waste Description, Physical and Chemical Form Contaminated Soil, Metal Oxides, Bldg. Rubble, Wood and Plant Hardware		17. Prominent Radionuclides Uranium (Nat.) .0028 Thorium (Nat.) .004																					
18. Total Curies (mCi) .054	19. Transport Group III	20. Total Cubic Feet 520																					
21. Waste Classification																							
<table border="0"> <tr> <td><input checked="" type="checkbox"/> Radioactive LSA</td> <td><input type="checkbox"/> Bulk LSA</td> <td>Normal Form</td> <td>Special Form</td> <td>Fissile</td> </tr> <tr> <td><input type="checkbox"/> Radioactive LSA greater than Type A quantities</td> <td><input type="checkbox"/> Limited quantities and radioactive devices</td> <td><input type="checkbox"/> Type A quantity</td> <td><input type="checkbox"/> Type A quantity</td> <td><input type="checkbox"/> Class I</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Type B quantity</td> <td><input type="checkbox"/> Type B quantity</td> <td><input type="checkbox"/> Class II</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Large quantity</td> <td><input type="checkbox"/> Large quantity</td> <td><input type="checkbox"/> Class III</td> </tr> </table>				<input checked="" type="checkbox"/> Radioactive LSA	<input type="checkbox"/> Bulk LSA	Normal Form	Special Form	Fissile	<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Class I			<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Class II			<input type="checkbox"/> Large quantity	<input type="checkbox"/> Large quantity	<input type="checkbox"/> Class III
<input checked="" type="checkbox"/> Radioactive LSA	<input type="checkbox"/> Bulk LSA	Normal Form	Special Form	Fissile																			
<input type="checkbox"/> Radioactive LSA greater than Type A quantities	<input type="checkbox"/> Limited quantities and radioactive devices	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Type A quantity	<input type="checkbox"/> Class I																			
		<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Type B quantity	<input type="checkbox"/> Class II																			
		<input type="checkbox"/> Large quantity	<input type="checkbox"/> Large quantity	<input type="checkbox"/> Class III																			

UN2912

## CERTIFICATION

I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the information provided herein is complete and correct to the best of my knowledge, and that the shipper has complied with all the provisions as required by Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act

Date 8-28-84G.E. Walck - Construction Supt.  
Typed Name and Title of Agent of Shipper
  
Signature (G.E. Walck)

## CONSIGNEE ACKNOWLEDGEMENT

This acknowledges to the South Carolina Department of Health and Environmental Control that the above-described radioactive waste shipment was received

Date of Delivery \_\_\_\_\_

Signature of Consignee or authorized Agent \_\_\_\_\_

Typed or Printed Name and Title \_\_\_\_\_

DHEC 802

(5/80)

Original. S. Carolina  
Copy: Chem-Nuclear

(Copies of this form may be reproduced locally as needed)

UCCNHT0002222

Tri-State Motor Transit Company

Name of Carrier

RECEIVED subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading

UMETCO MINERALS CORPORATION

AT Maniatax@hior

September 4, 19 84 From

METALS DIVISION

Niagara Falls, NY

UNION CARBIDE CORPORATION

For use via carrier truck under the exclusive/sole use shipments/movements

the property described below in apparent good order except as noted (contents and condition of contents of packages unknown) marked, consigned, and destined as indicated below which said carrier (the word carrier being understood through out this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns

CHEM NUCLEAR SYSTEMS, INC.

SHIPPER'S ORDER NO

CUSTOMER'S ORDER NO

Consigned to ~~UCC Metals Division~~ BARNWELL MANAGEMENT FACILITIES

Destination ~~Yoravan~~ BARNWELL (Osborn Road)

State ~~COLORADO~~ S. Carolina

County ~~Montrose~~ BARNWELL

Route

Delivering Carrier Tri-State Motor Transit

Car or Vehicle Initials 3992

No 445102 Seal 262505

No Packages	Kind of Package, Description of Articles, Special marks, and Exceptions	*Weight (Sub to correction)	*Class or Rate	Check Column
8	Radioactive Materials, LSA, n o s (520 cu. ft.)			
	<del>Radioactive Material UN 2912</del>			
	<del>U Natural</del>			
	<del>U Radium Thorium Residues (From Chemical Processing)</del>			
	<del>U 235 Max Curie per Package</del> Less than one (1) pound source			
	material - solid, metal oxide, contaminated soil,			
	building rubble, wood and plant equipment.			
	This is to certify that the above named materials are properly classified described packaged marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation			
	Signed <i>S. E. Walck</i>			
	Vehicle assigned for sole use of consignor. Do not load other freight on the vehicle do not transfer in route and do not break the seal on truck			
	Carrier hereby acknowledges that prior to or at the time this shipment was offered for transportation, the shipper provided or affixed according to applicable regulations the required placards or orange panels (including prescribed identification numbers) for each hazardous material named hereon			
	Signed <i>Robert H. Morris</i>			

Subject to Section 7 of Conditions of applicable bill of lading if this shipment is to be delivered to the consignee without recourse on the consignor the consignor shall sign the following statement

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

(Signature of consignor)

~~26 charges are to be prepaid~~ Write on stamp here to be prepaid

Third Party PREPAID (See Below)\*

Received \$ to apply in prepayment of the charges on the property described hereon

Agent or Cashier

Per (The signature here acknowledges only the amount prepaid)

Charges advanced

\$ This shipment is correctly described

Correct weight is lbs Subject to verification by the

\*L.G. Evans

Umetco Minerals Corp.

P.O. Box 97  
Niagara Falls, NY 14302

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

METALS DIVISION  
UNION CARBIDE CORPORATION

UMETCO MINERALS CORPORATION

Shipper

Agent

Per *S. E. Walck*  
Permanent postoffice address of shipper  
UC 326-34 G.E. Walck

Per

UCCNHT0002223

is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading nor a copy or duplicate covering the property named herein and is intended solely for filing or record.

RECEIVED subject to the classifications and tariffs in effect on the date of the receipt by the carrier of the property described in the Original B 11 of Lading.

FREIGHT BILL NUMBER

457966

SHIPPER S NUMBER

65-3005

From United Marine Corp DATE SHIPPED 9-4-84

At Haystack Falls, N.Y.  
ORIGINATING  
CARRIER

ORIGINATING  
CARRIER

CONSIGNED TO

## EXECUTIVE OFFICES

P O BOX 113, JOPLIN MO 64801

CONSIGNEE TO (Mail or street address of consignee - For purposes of notification only)

DESTINATION

DELIVERY ADDRESS

CONNECTING CARRIER(S)

DELIVERING CARRIER

TRACTOR NO

TRAILER NO

NUMBER PACKAGES	KIND OF PACKAGE	DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS	★ WEIGHT (Subject to Correction)	CLASS OR RATE	TCK COL	
						P
DIMENSIONS OF CARGO BEFORE LOADED	LENGTH		WIDTH		HEIGHT	TOTAL FEET OF TRAILER SPACE OCCUPIED
	FT	IN	FT	IN	FT	IN

(Signature of consignor )

If charges are to be prepaid write  
or stamp here To be Prepaid

Rec'd \$ \_\_\_\_\_ to  
apply in prepayment of the charges  
on the property described hereon

Agent or Cashier

(The signature here acknowledges only the amount prepaid.)

Charges advanced	
------------------	--

UNLESS A GREATER VALUE IS DECLARED, THE SHIPPER HEREBY RELEASES THE VALUE TO \$5000 00 PER TON OF 2000 POUNDS FOR EACH ARTICLE

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION, ACCORDING TO THE APPLICABLE REGULATION OF THE DEPARTMENT OF TRANSPORTATION

**UNLESS OTHERWISE NOTED VEHICLE CONTAINS HAZARDOUS MATERIALS PROPERLY PLACARDED IN ACCORDANCE WITH 49CFR172.506**

ARRIVED AT SHIPPER	DATE 9-4-84	TIME 8:30 AM	PREARRANGED SCHEDULE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		DATE 9-4-84	TIME A M P M	LOADING STARTED	DATE	TIME A M P M
LOADING COMPLETED	DATE 9-4-84	TIME 11:15 AM	VEHICLE RELEASED	DATE 9-4-84	TIME 11:30 AM	SHIPPER'S SIGNATURE [Signature]		9-4-84	
IF THIRD PARTY BILLING, BILL TO					SHIPPER PER		AGENT PER		

SIGNATURE TALLY RECEIPT — Must be filled out and signed at origin and each time the shipment changes custody

DATE SHIPMENT RECEIVED FROM CONSIGNOR			1ST TIME CARGO CHANGED CUSTODY			2ND TIME CARGO CHANGED CUSTODY			3RD TIME CARGO CHANGED CUSTODY			4TH TIME CARGO CHANGED CUSTODY		
DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO
DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL
DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL
1ST TIME CARGO CHANGED CUSTODY			2ND TIME CARGO CHANGED CUSTODY			3RD TIME CARGO CHANGED CUSTODY			4TH TIME CARGO CHANGED CUSTODY			5TH TIME CARGO CHANGED CUSTODY		
DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO	DATE	TIME	TRACTOR NO
DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL
DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL	DRIVER'S SIGNATURE		HOME TERMINAL
ARRIVED AT CONSIGNEE	DATE	TIME A M P M	PREARRANGED SCHEDULE	<input type="checkbox"/> YES <input type="checkbox"/> NO	DATE	TIME A M P M	UNLOADING STARTED	DATE	TIME A M P M					
UNLOADING COMPLETE	DATE	TIME A M P M	VEHICLE RELEASED	DATE	TIME A M P M	CONSIGNEE'S SIGNATURE								
RECEIVED THE ABOVE DESCRIBED PROPERTY IN GOOD CONDITION EXCEPT AS NOTED						X								

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's Certificate of Compliance

1. Name of Shipper and Address:  
Umetco Minerals Corporation  
137 - 47th Street  
Niagara Falls, NY 14302  
Telephone No. (716) 278-3361

2. Shipment Identification No.

0984-211A

3. Transport Permit No.

0211-31-84-X

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations, both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wastes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date September 4, 1984

G.E. Walck, Construction Superintendent

Typed Name and Title of Agent of Shipper

Signature

Part II: Carrier's Certification

1. Name of Carrier and Address:  
Tri-State Motor Transit Company  
P.O. Box 113  
Joplin, Missouri 64801  
Telephone No. (300) 641-7591

2. Shipment Identification No.

0984-211A

3. Transport Trailer No.

445102

4. Scheduled Date of Departure of Shipment:

September 4, 1984

5. Estimated Date of Arrival of Shipment:

September 6, 1984

Certification is hereby made to the South Carolina Department of Health and Environmental Control that. (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occurring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

Date September 4, 1984

Clinton Williams  
Typed or Printed Name and Title

Signature